

AMENDMENT UNDER 37 C.F.R. § 1.116
U. S. Application No. 09/489,846

REMARKS

Claims 1-13 are pending in the application.

By the present Amendment, Applicant proposes to add new claims 14-17 to further define the present invention.

In response to the Amendment filed January 8, 2003, the Examiner removed all of the previous claim rejections. The current status of the claims is as follows.

Claims 5-8 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Claims 1-13 are rejected under 35 U.S.C. § 102(e) as being anticipated by newly-cited Rogers et al. (US 2002/0081006 A1).

With regard to the rejection of claims 5-8 under § 112, second paragraph, Applicant proposes to amend the claims as shown above. This feature is described in the specification at page 8, lines 9-16, for example. Regarding the disclosure of the means for relating and storing results, the specification describes the relating and storing functions of the claims at page 17, lines 3-9 and page 21, lines 8-13, for example. Thus, Applicant submits that the means for relating and storing is adequately described in the specification and the rejection of claims 5-8 is hereby overcome.

Furthermore, Applicant proposes to add the limitations of claims 6 and 8 (i.e., the evaluator means) into claims 5 and 7, respectively.

Turning to the prior art rejection, Applicant has the following comments.

Rogers et al. relates to a method and system for detecting and displaying clustered microcalcifications in a digital mammogram, wherein a single digital mammogram is first automatically cropped to a breast area sub-image, which is then processed by means of an

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optimized Difference of Gaussians filter to enhance the appearance of potential microcalcifications in the sub-image. The potential microcalcifications are thresholded, clusters are detected, features are computed for the detected clusters, and the clusters are classified as either suspicious or not suspicious by means of a neural network. As disclosed in paragraph [0014] of Rogers et al., the system disclosed by Rogers et al. operates in the following manner.

The radiologist first reviews the original mammograms and reports a set of suspicious regions of interest, S1. A CAD system, or more particularly, the CAD system of the invention, operates on the original mammogram and reports a second set of suspicious detections or regions of interest, S2. The radiologist then examines the set S2, accepts or rejects members of S2 as suspicious, thus forming a third set of suspicious detections, S3, that is a subset of set S2. The radiologist then creates a fourth set of suspicious detections, S4, that is the union of sets S1 and S2, for subsequent diagnostic workups. CAD system outputs are thereby incorporated with the radiologist's mammographic analysis in a way that optimizes the overall sensitivity of detecting true positive regions of interest.

Applicant submits that Rogers et al. do not teach or suggest storing the plurality of processed abnormal pattern results and the plurality of corrected abnormal pattern results, which are related to each other by the relating operation. Paragraph [0014] of Rogers et al. discloses that a radiologist creates a first set of suspicious regions of interest S1 and the CAD system operates on the original mammogram and reports a second set of suspicious detections S2. The radiologist then examines these detections S2 and either accepts or rejects them, thus forming a third set of detections S3. The radiologist also creates a fourth set of suspicious detections S4, which is the combination of S1 and S2. Thus, the CAD system creates a set S2 and the

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radiologist creates sets S1, S3, and S4. Also, Rogers et al. make the general disclosure in paragraph [0046] that digital images are stored as digital representations of the original mammogram images on computer-readable media. In other words, the original images are stored. Although there are four sets of suspicious detections created in the system of Rogers et al., Applicant submits that the reference fails to teach or suggest relating a result of the processed abnormal pattern to a result of the corrected abnormal pattern, for each of the plurality of items of the inputted image information. Instead, Rogers et al. teach storing, but not relating, original images on computer-readable media. Absent a teaching of relating a result, it cannot be assumed that merely storing images necessarily indicates that the system of Rogers et al. relates results in a memory.

Also, Applicant submits that the Examiner's assertion that the set of suspicious detections S2 are incorporated with the radiologist's analysis does not correspond to relating a result in a memory. Rather, the asserted disclosure of Roger et al. simply indicates that the radiologist examines the set S2.

Therefore, Applicant submits that claims 1 and 3 are allowable over the prior art for at least this reason.

Additionally, Applicant submits that claims 2 and 8-13 are allowable over the prior art, at least because of their dependence from claim 1.

With respect to claims 5 and 7, Applicant submits that these claims are allowable over the prior art, for reasons analogous to those for claims 1 and 3.

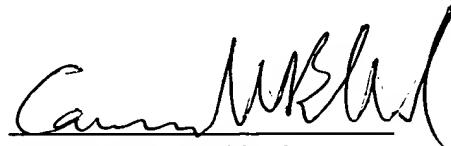
New claims 14-17 are believed to be allowable, at least because of their dependence from claims 1, 3, 5, and 7, respectively.

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In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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